half. The consequence is that I am made to impute to Pigou the authorship of resistance to funding in war finance, whereas what I really do so impute is the authorship of the inflation argument in connection with such opposition. There were prophets, of course, before Saul. But it is not of prophets that I am speaking.

Professor Patten is perhaps aware of some earlier statement of the inflation argument than that contained in Pigou's writings, in which event it is desirable in the interest of doctrinal history that he set the facts forth, and none will rejoice more than I. But interesting as this might be, it is not the matter in issue between Professor Patten and myself, and should not be permitted to become so. Professor Patten charges me with attempting to discredit an opponent by asserting incorrectly that resistance to funding in war finance is a new contention. I have made no such assertion, and with this fact brought to his notice, Professor Patten will doubtless wish to make an explicit correction of his statement.

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WHO IS THE TWENTIETH CENTURY MANDEVILLE?

In the last number of the REVIEW my old friend, Professor Patten, does me the honor of letting loose his barbed arrows of sarcasm against a position which, however vulnerable, has hitherto been stoutly defended by me. Two things go without saying in this controversy: first, that nothing which Professor Patten may allege can lessen the admiration that I entertain for his achievements in economic science; second, that his criticism has caused me a searching of heart and has led me to review carefully not only my conclusions but also the various steps in the argument. The issue that has been joined is therefore entirely one of scientific truth. And while Professor Patten will doubtless give me the credit of being as open minded in the matter as he is, I trust that he will not consider me pigheaded if I cannot yet lower the flag.

The interval, however, between the appearance of his criticism and the writing of this rejoinder has been so short that I must content myself here with a brief reply, leaving to what I hope will be the not distant future the more thorough analysis of the problem which the subject deserves.

Let me state, then, at the outset, that in the fundamental point of issue there is really far less difference between us than Professor

Patten thinks. So far as his basic position is concerned—namely the relation of production and consumption—there is no difference at all. I also believe—and have never said anything to the contrary—that in a war like this the very first prerequisite is to reduce consumption at least to the level of production and preferably far below it. The only way to get along, in fact, whether in war or in peace is to produce more than you consume. But, as the famous lines in the play go: "That has nothing to do with the case." The controversy between loans and taxes is quite apart from that issue.

Moreover, while it is both amusing and ingenious, Professor Patten's characterization of me as the twentieth century Mandeville is neither generous nor correct. It is not generous because the patent absurdity of the idea implicit in the poetic effusion quoted by Professor Patten is by no means a necessary conclusion from the principles advocated by me. It is not correct because it is a false analogy. What Mandeville attempted to prove was that private vices are public benefits. But since, as just stated, I have nowhere claimed that private luxury or excessive private expenditure is either a private or a public benefit, the analogy does not hold. On the contrary, if this were a mere matter of calling names I could retort that the true Mandeville is Professor Patten himself, in so far as the essence of the contention is concerned. For as Professor Patten would, of course, not deny that private credit is, to a certain extent at least, legitimate, his opposition to public credit may be boiled down to the statement that what is good in private life is bad in public life. While Mandeville, in short, alleged that private vices are public benefits, Professor Patten claims that private benefits are public vices. And since both of these paradoxes really come to the same thing, a good argument might be made out for the statement that Professor Patten is the real twentieth century Mandeville.

After this rather inconsequential introduction, however, let us come to the real point at issue. The true difference between the two schools of thought represented by Professor Patten and myself is the attitude toward the theory of public credit. Professor Patten contends that all war expenditures must be defrayed from taxes; I argue that there is a substantial place for the utilization of public credit. Professor Patten refers to the fact (p. 93) that to many credit is an obscure or mysterious phenomenon and he then proceeds to give, in outline of course, his theory of credit. Private credit, according to him, has only two functions to perform—to bridge over the interval between the time when the work is performed and the object produced is consumed and, second, to compensate the irregularity of business enter-

prise. All credit to him is therefore not only bank credit but short-time credit and he goes so far as to say that the nearer we come to eliminating credit, except in these two instances, the better for the nation.

Is this, it may be asked, an analysis of the phenomenon worthy of a thinker like Professor Patten? Is it true, in the first place, that all legitimate credit is banking credit; and is it true, in the second place, that all legitimate credit is short-time credit?

To answer the second question first, what shall we say of the ordinary operations of the German banks in financing long-time industrial enterprises? Is it not a fact that one of the chief distinctions between the banks of Germany and those of other countries has consisted precisely in this fact, which is in no mean degree responsible for the prodigious development of German economic prosperity? Is it not true that other countries are taking a leaf out of the book of German experience, and that at this very moment preparations are being made in Great Britain, in France, and in the United States to introduce after the war these German banking methods? And what shall we say of the war conditions themselves? What is the real meaning of our new War-Finance Corporation, with its three billions of so-called notes, if not a direct reply to Professor Patten's contention that all legitimate credit is short-time credit?

If Professor Patten's second point is erroneous, how much more so is his first contention that all credit is bank credit. On the contrary, when we come to analyze modern economic life we shall see that there is a widespread use of two forms of credit, neither of which has anything to do directly with banks. Modern credit is either consumption credit or production credit. Let us take them up in turn.

In former times there was indeed some utilization of consumption credit. Pawnbrokers in some form or other are no doubt as old as civilization itself; and in the primitive agricultural economy, whether of mediaeval Europe or of the southern states of America, many a peasant or cultivator has made use, for good or for evil, of the loans extended to him by the country merchant. But modern consumption credit is of a very different kind. Nowadays the principle of purchase in instalments has become an accepted part of the modern economy. Today we buy pianos and sewing machines, furniture and agricultural implements, workingmen's houses and even more substantial edifices in instalments. In fact, in modern times and especially in advanced communities like the United States we have gotten into the habit of securing almost all commodities, except food and clothing, through the

medium of credit. The field of consumption credit is constantly broadening and it is a form of credit which is largely irrespective of the existence of banks.

Far more important, however, in our modern economy is production credit. When we say that our business life is primarily assuming the form of corporate activity, we are virtually stating that modern business is primarily a credit economy. Our railroads, our other public utilities, our industrial corporations and trusts of all kinds have come to depend for their very existence upon the issue of securities. What is a railroad or industrial bond if not a manifestation of long-time, or perhaps even perpetual, credit? What would happen to the construction of buildings and skyscrapers in the city of New York, for instance, if it were not possible to finance the building operations by the use of credit to the extent of even 80 or 90 per cent of the cost? And the credit advanced in such cases is by no means necessarily a short credit. It may run for decades, even for generations. In fine, the whole system of modern industry, and nowhere more than in the United States, is based upon credit which is neither short credit nor necessarily even bank credit. To deny, as Professor Patten somewhere seems to do, that the modern economy is essentially and distinctively a credit economy is to shut one's eyes to the most glaring facts of the situation.

The reasons, of course, why modern credit has assumed these gigantic proportions are: first, that the system of deferred payment, or payment in instalments, greatly lightens the burdens of economic life; and, second, that it renders possible the utilization on a large scale of the marginal capital of society, *i.e.,* that it puts at the disposal of the community those parts of social capital which can be most easily dispensed with by their owners. In both these ways costs are lessened and output increased. Private credit is in its essence productive of wealth. It is far more than a banking phenomenon; it is far more than a short-time phenomenon: it is the very foundation of our modern economic structure.

That credit may be abused is no argument against its use. Because John Law was finally led into the vagaries of the Mississippi scheme is no argument against the existence of banking. Because we have plungers and corners on the stock exchange is no argument against the legitimate function of speculation. He would indeed possess hardihood who should deny the economic utility of private credit as the basis of modern economic life.

But if private credit is socially useful, why should public credit be dangerous? Professor Patten gives us no answer to this question.

On the contrary, his attempt to answer it raises the whole question of objective and subjective costs and leads him to take back not a few of the statements which form a large part of the solid contributions that he has made to economic science.

Professor Patten asks me to state what are the subjective costs which I think can be postponed? "Were they stated, they would be found to be feelings which we compensate in the future at our peril" (p. 92). Let us see.

Is it true that the postponement of payment involves a perilous compensation in the future? Is it true that the postponement of subjective costs can have no influence upon present objective costs?

The statement that the costs of a war, from the objective point of view, must be met in the present is of course entirely true. The guns must be manufactured now and the supplies must be forthcoming now. It is now that they are needed and not in the future. But has anyone in his senses ever thought of denying that fact? And is there any difference between public credit and private credit in this respect? If I buy furniture in instalments can any one deny that the furniture must be produced now? If a railroad secures its capital in large part by the issue of 50-year bonds, does any one deny that the railroad must be built now? If I erect a skyscraper to an overwhelming extent by the issue of long-time securities, does that imply that the skyscraper must not be built now? In all these cases, the articles or commodities are produced now; but the essential point is that they are not paid for now, at least not in cash: they are paid for in promises; or, to put it more exactly, the cash handed over to the sellers of material and labor is almost entirely borrowed. There is a present production but a future payment. The objective costs must indeed be met now—the labor must be hired and the materials secured. These costs cannot be postponed: that goes without saying. But the subjective costs of the producer are lightened. In fact, they are lightened to such an extent that they react upon the objective costs. If the furniture buyer could not pay for the furniture in instalments he would not buy the furniture at all; and with the lessened demand for the furniture, there would be less produced. If the proposed railway could not market its bonds, the railway would not be built. If the real-estate operator could not borrow through his first, second, and third mortgage loans, the skyscraper would not be constructed. In every case, the increase of the subjective costs which would ensue upon the abolition of credit would react upon the objective costs. If there were no credit in these cases there would be no production; or if there

were any production, it would be at a very much higher cost; that is, there would be less production. Credit, in other words, increases production by decreasing costs. The decrease of subjective individual costs may lead to a decrease of objective social costs. The diminution of the total aggregate sacrifice is equivalent to, or is followed by, a greater social production.

But if all this is true of private credit, why is it not equally true of public credit? If it is true of a railway in private hands, why is it not true of a railway that belongs to the government? And if it is true of public credit in peace time, why is it not true of public credit in war time? As a matter of fact, it is as true of war finance as of peace finance. The guns and the supplies must be furnished now. But if we were to rely entirely upon taxes and not at all upon loans, the point is that there would be far less likelihood of their being produced now. They are produced now because they can in large part be paid for in the future through the use of public credit. If they had to be paid for now in cash raised by taxation, not so much would be produced because the excessive taxes would cripple production. As Professor Scott, of Glasgow, so well puts it: "If the choice is between immediate and deferred taxation, why should the burden be postponed, would it not be better to meet it at once and leave the future unembarrassed?" His answer is this: "The mere fact of giving the taxpayer time to adjust himself to a new and heavy burden will lighten it materially for him. Also industry, in time, has a chance of expanding to provide a part of the new imposts."[1]

It is clear then, not only that the lessening of the subjective costs, that is of the burden of paying for the supplies, is not necessarily attended by perils, as Professor Patten thinks, but that as a matter of fact, this postponement of payment involved in the diminution of subjective costs may mean not only a smaller total aggregate sacrifice but even a diminution of the objective costs in the present. Public credit, in other words, may give us more guns and more supplies now.

This is a fundamental point that is overlooked by Professor Patten when he discusses the relations between present production and present consumption. As was stated at the outset of this article, there is no difference between us as to the desirability of such a correlation. Our difference consists in the estimate of the scientific probabilities. Professor Patten tells us (p. 97) that taxation "would bring order out of chaos and not only exempt future generations from the burdens of

[1] W. R. Scott. *The Adjustment of War Expenditure between Taxes and Loans.* (Glasgow, 1917), p. 19.

war, but also lighten those of the present." As I have sought to point out elsewhere, however, and as I think could be proved if there were more space, the evils of excessive taxation in this respect are greater than the benefits of moderate taxation. For, in the first place, taxes, especially high income and business taxes, would not necessarily reduce consumption but might lead to borrowing. And, in the second place, to the extent that excessive taxes would restrict production, this influence might very possibly outweigh any effect in reducing consumption, so that the total margin of production over consumption would be less than before. Here again we are fortunate in being able to quote Professor Scott's judicious conclusion in confirmation of our position. "The all-tax method, if applied in practice, would result in a very curious paradox—its object is to avoid loans, but the amount of taxation required would be certain to induce loans through the magnitude of the tax forcing the contributors to borrow in order to pay their taxes, and so the position is reached that a method is recommended in order to avoid borrowing, which, on the contrary, compels borrowing."[2]

With Professor Patten's views on inflation and his attack upon Professor Hollander there is no occasion to deal here, as Professor Hollander is abundantly able to take care of himself. What, however, needs to be done and what is not even attempted by Professor Patten, is to give a correct analysis of inflation, to point out the distinction between the necessary and beneficial expansion that inevitably takes place in a war and the illegitimate and exaggerated expansion that we call inflation. Above all, it would be necessary to show in detail to what extent inflation is a specific and necessary consequence of loans as against taxes. A recent careful investigator has come to the conclusion that "The probabilities are that very high taxation would cause more inflation than a well devised system of borrowing."[3] Although I am not prepared to go quite so far as this, I see no reason to depart from my previously expressed conclusion that there is comparatively little to choose, from the point of view of inflation, between taxes and loans.

One other point of theory made by Professor Patten deserves a word. He emphasizes the fact, at the close of his article, that a higher rate of interest should be paid on the loans and that the opposition of business men both to high taxes and to high rates of interest rests upon a defective view of their own welfare. As to this I shall content myself here with calling attention to the fact that while it is indeed true, as I

[2] *Op. cit.*, p. 16.

[3] Scott, *op. cit.*, p. 17.

have elsewhere contended, that the government should always pay the current rate of interest in issuing its loans and not rely on patriotism alone, not a little can be said in defense of the desirability of keeping the interest rates down to the lowest practicable figure. There are, in fact, three arguments that may be advanced against unduly high interest rates. The first is the well founded objection to profiteering. If, as is now becoming the rule, prices of commodities in general are restricted by government in the supposed public interest, why should not the price of the most important commodity of all, namely capital, be similarly kept down? This argument becomes all the stronger in proportion as the income from this capital—that is, the interest on the public debt—is exempted in part or in whole from taxation. Every one per cent that is paid in the rate of interest yielded by the bonds assumes an ominous significance when the debt is counted by the billions. In the second place, every increase in the rate of interest on the public funds where, as with us, they are sold at par, will bring with it a progressive depreciation in general security values. A 5 per cent government bond will mean a considerable fall in the price of a 4 per cent railway or industrial security. In a country like ours where such securities form the foundation of all industry, a slump in stock exchange values will have a widespread and marked effect upon production in general. In the third place, any increase in the price of capital necessarily restricts the utilization of capital. It is true, indeed, that the ultimate effect of an increase in interest rates may be to set into motion those forces which spell an increase in capital itself. But as against these ultimate results must be put the immediate checks upon all activity caused by the higher costs involved in the rise of the discount rate. Thus from the point of view of industrial prosperity not a little may be said in defense of the business man's view which Professor Patten characterizes as "a crude antipathy."

In that part of Professor Patten's article which deals with the history of the theory, rather than with the theory itself, there is also abundant room for dissent. Professor Patten has much to tell us of the aversion from loans exhibited by the early British economists. Two considerations, however, offer themselves there. In the first place, a more detailed study of the British economists would show that the early opinion was by no means so unanimous as Professor Patten would have us believe. Second, the unanimity, so far as it is found, is very largely due to insufficient analysis. Adam Smith wrote long before all the modern principles of modern credit had been elaborated; for when he wrote he was still confronted by a cash economy and not a credit

economy. His view of public credit, moreover, was largely tinged by the same opposition to public activities and governmental functions in general which were so characteristic a mark of his age. Moreover, every careful investigator would have to agree with the judgment recently pronounced by Professor Edgeworth when he states: "The authority of Adam Smith and the other classical economists who denounced loans would count for much, but that their judgment is based upon a disputable conception as to the nature of a public loan."[4]

And when Professor Patten makes what he thinks are telling quotations from Chalmers he forgets that Chalmers was a feudal conservative whose opposition to loans, like that of John Stuart Mill, was in large part based upon the conception of the wages fund—a doctrine the error of which has been indisputably proved by modern science. Nor is Professor Patten much happier when he states that these views have "ever since been regarded as an essential part of economic theory." So far is this from being the case that, on the contrary, this British view never found any lodgment among the German, Italian, or French economists, many of whom went quite to the opposite extreme and well nigh all of whom refused to accept the British reasoning. But what is still more important is that virtually all of the leading British economists of the last generation have broken away completely from the views represented by Professor Patten. I may be pardoned for stating that with the same mail that brought Professor Patten's onslaught on my address there came a batch of appreciative comments from the leading British economists, of which I shall take the liberty of quoting only one. Were it not that Professor Edgeworth had already given public expression to his views I should otherwise not have felt at liberty to make this extract from a private letter: "Your conclusion commands my assent and the reasoning based on the conception of subjective costs and aggregate sacrifice appears to me perfectly sound." Virtually the only British writer who shares the view expressed by Professor Patten is Mr. Hartley Withers, who is continually harping on the doctrine of objective costs in *The Economist*[5] which he so admirably edits, but whose book on the subject has been rather

[4] F. Y. Edgeworth, *Currency and Finance in Time of War,* (Oxford, 1917), p. 19.

[5] In my address "Loans versus Taxes in War Finance," in the *Annals of the American Academy of Political and Social Science* for January, 1918, I stated on page 65 that "Mr. Hartley Withers, who originally held this view, has been so influenced by the rather hasty pronouncement of some American writers that he has recanted." Mr. Withers writes to me that I am mistaken

adversely criticised in this respect. As Professor Price says at the close of a long review: "The moral then can be drawn that, in spite of cogent arguments pressed with robust conviction by Mr. Withers, in his book, as week by week in the editorials of *The Economist,* the case for taxes against loans is not immune from demurrer or rebuttal."[6]

It may therefore be contended that Professor Patten is far from proving his point. Not only does he give us, quite unwittingly of course, an incorrect picture of the history of the doctrine but he is entirely out of harmony with the trend of modern economic thought. With the exception of a very few American economists, who had never previously given much attention to the problems of public finance, it may be said that the overwhelming mass of leading writers at present support the views which Professor Patten opposes. In a series of articles which I propose to publish in the near future I hope to show in detail not only how mistaken is Professor Patten's intimation as to the course of economic theory, but also how erroneous are the alleged facts found in the ordinary treatises as to the history of loans and taxes in war finance. One writer has copied from another and no one has taken the trouble to get the truth from the original sources. When the facts are published the opinions of the classical economists will be set in their proper perspective and a new basis will be furnished for present-day discussion.

It is impossible to refrain, in conclusion, from adverting to Professor Patten's contention that "The problem of loans and taxation is becoming the test of two systems of economics as diverse in their aims as the mercantile system and that of Adam Smith. A compromise between Smith and a mercantilist is impossible and so is a tax system partly resting on bonds and partly on taxation" (p. 96). With all due deference to my good friend I should like to call attention to the fact that economic statesmanship and even economic theory is often compounded of compromise. Were we compelled to choose, in either theory or practice, between the laissez faire economist and the socialist, the choice would be difficult. The mischievous critic might even ask Professor Patten himself whether the theory of protection, which he has done so much to expound, is not really a compromise between Adam

in this. "This is not so. If I am wrong it is a case of original sin. The chapter in *Our Money and the State* was written before I had seen Professor Sprague's article. I thought that it might interest you to hear that I was not echoing Sprague, but have made my own blunder, if it be one." It is needless to say that I deeply regret my unfounded imputation.

[6] *The Oxford Magazine,* February 8, 1918, p. 156.

Smith and the mercantilists? In fact, the whole conception of the distinction between the use and the abuse of any economic institution rests upon the idea of a compromise or a mean between untenable extremes. We may close with the well considered opinion of Professor Price—an opinion that is shared by Britishers like Edgeworth, Nicholson, and Scott, and by Americans like the two Adamses, Bullock, and Plehn—that: "The problem of distributing the weight of war finance equitably between the living and future generations, has not, we opine, been relegated to the limbo of the otiose or obsolete; and here, as elsewhere, a *via media* is probably the best path for discreet efficient statesmanship to tread."[7] If Professor Patten desires to become an advisor to statesmen, I recommend his pondering this sentence.

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[7] Price, *op. cit.*, p. 157.

"METHODS OF PROVIDING FOR NEW BUSINESS EXPENSES BY LIFE INSURANCE COMPANIES": A REPLY

The premium charged for life insurance contracts today is predicated on certain assumptions regarding the rate of mortality which will probably be experienced, the interest rate earned on invested assets, and the rate of expenditure necessary to the several operations of life insurance administration. In the advance determination of the premium to be charged the policyholder the net or mortality premium is first calculated—that portion which is calculated on the basis of mortality and interest assumptions to care for the policyholder's share of average mortality costs. Mortality costs are thus allocated always on the basis of averages-mutuality, some one has called it. That is, a particular policyholder may pay a far smaller amount in net (mortality) premiums than the amount paid to his beneficiary at the maturity of his policy, or he may pay far more than this amount. On the *average*, for such is insurance, they balance. But such is not necessarily the case with the loading element of the premium, the part which cares for expenses. It seems to be a matter of fair agreement that in so far as possible each policyholder shall pay the expenses incident to his own policy. This principle is accepted in a recent discussion of the problem of new business expenses.[1] The principle cannot be adhered to for the first five or six years after a policy is issued, for these early years constitute the period of heavy expense, and the loading cannot be made level

[1] H. L. Rietz, in THE AMERICAN ECONOMIC REVIEW, Dec., 1917, p. 832.